



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/478,144	01/05/2000	Christopher M Herring	P04659	1299

7590 09/25/2003
John L. mAXIN
national Semiconductor
801 East Campbell Road Suite 525
Richardson, TX 75081

EXAMINER

HYUN, SOON D

ART UNIT	PAPER NUMBER
----------	--------------

2663

DATE MAILED: 09/25/2003

16

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/478,144

Applicant(s)

HERRING ET AL.

Examiner

Soon-Dong Hyun

Art Unit

2663

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 July 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6, 13-16 and 18-20 is/are rejected.
- 7) ☒ Claim(s) 7-12 and 17 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

1. Applicant's arguments with respect to claims 1-20 have been considered but are moot in view of the new ground(s) of rejection.

Claim Objections

2. Claims 1, 13 and 20 are objected to because all instances of "adapted to" or "adapting" in each claim should be deleted to make the claim positive. Language such as "adapted to/for", "configured to/for", or arranged to/for" (or similar phrases such as "enabled to", "capable of", etc.) is not considered positive recitation per MPEP 2106.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1, 2, 4, 5, 13, 14, 20 are rejected under 35 U.S.C. 102(e) as being anticipated by Haartsen (U.S. Patent No. 6,393,007).

Regarding claims 1, 4, 13, and 20, Haartsen discloses a TDMA/TDD communication system and method for a base station (2) and a plurality of remote radio communication units (6, 7) using a time slot hopping scheme, wherein the system

Art Unit: 2663

provides radio communications in the ISM (Industrial Scientific and Medical) band of 2.4 GHz to 2,4835 GHz comprising 79 radio frequency channels (at least 75 carrier-frequencies) in the ISM band and a hop rate of 100 hops per second, see col. 14, lines 27-37. Haartsen further discloses that the base station and each remote radio communication unit (a cordless personal access device) comprises a transceiver 8 (an RF sub-module), see col. 6, lines 45-47. Haartsen does not explicitly teach a baseband processor to provide, but the processor is inherently required to provide time slot and frame timing (FIG. 4) to the transceiver such that the 79 frequency channels and the hop rate are maintained.

Please note that patentable weight is not given to claimed term "DECT processor", because the DECT processor must be distinguished from the processor in the prior art in terms of structure rather than function, See MPEP 2114.

Regarding claims 2 and 14, Haartsen further discloses that the system supports concurrently voice and data communications, see col. 8, lines 56-59.

Regarding claim 5, Haartsen further teaches that each frame has a length of 10 ms.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Art Unit: 2663

6. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

7. Claims 3, 6, 15, 16, 18 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Haartsen (U.S. Patent No. 6,393,007) in view of Fazel (U.S. Patent No. 6,275,506).

Regarding claim 3, refer to the discussion for the claim 1. However, Haartsen does not explicitly teach the format of each time slot. Fazel teaches that the FH-SS (Frequency Hopping-Spread Spectrum) concept of Haartsen could be applied the DECT standard, see col. 2, line 21-col. 3, line 9, i.e., the time slot format of the DECT standard could be used with the FH-SS scheme. Those of skill in the art would be motivated to incorporate the time slot format of the DECT standard into Haartsen, because Haartsen and the DECT standard support a TDMA/TDD radio communication system and the time slot format for the DECT standard is well-known in the art of TDMA/TDD radio communications, wherein each time slot used in the DECT standard comprises a 32 bit preamble for synchronization, a 64 bit A-field for signaling and a B-field comprising 320 bit and 4 bit for CRC, see specification of the present application page 3, lines 10-15.

Therefore, it would have been obvious to one having ordinary skill in the art to incorporate the time slot format of the DECT into Haartsen.

Regarding claim 6, Haartsen teaches a frame having 24 time slots as a preferred embodiment, see col. 9, lines 11-26. Therefore, it would have been obvious to one having ordinary skill in the art incorporate a frame format having 16 time slots into Haartsen without deviating from the broad principal and spirit of the invention of Haartsen.

Regarding claims 15, 16, and 18, refer to the discussion for the claims 2 and 14, but Haartsen does not explicitly teach that the voice communication and data communication share equal amounts of the time frame. However, It would have been obvious to one having ordinary skill in the art to share equal amounts of the time frame when the remote radio communication units for the voice and data are equal.

Regarding claim 19, Haartsen further teaches that each frame has a length of 10 ms.

Allowable Subject Matter

8. Claims 7-12 and 17 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Soon-Dong Hyun whose telephone number is (703) 305-4550. The examiner can normally be reached on Monday-Friday from 8:30 A.M. to 5:30 P.M..

Art Unit: 2663

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chau Nguyen, can be reached on (703) 308-5340.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 305-3900.

10. Any response to this action should be mailed to:

Commissioner for Patents

P.O. Box 1450

Alexandria, VA 22313-1450

Or faxed to: 703-872-9306 for formal communications intended for entry with a label of "OFFICIAL" and for informal or draft communications with a label of "PROPOSED" or "DRAFT" (attn: Art Unit 2663, Soon-Dong Hyun).


S. Hyun

9/19/2003



CHAU NGUYEN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600